

REMARKS

Reconsideration and allowance of the present application are respectfully requested. Claims 1-17 remain pending in the application. Support for the amendment to claims 1, 13 and 15 appears, for example, in paragraph [0026]. New claims 18-19 have been added.

Applicant notes with appreciation the indication of claim 3 contains allowable subject matter. By the foregoing amendment, claim 3 has been rewritten into independent form and is now allowable. The remaining independent claims 1, 13 and 15 are considered to afford Applicant a scope of protection to which he is entitled in light of the documents relied upon in the Office Action.

More particularly, in numbered paragraph 2 on page 2 of the Office Action, claims 1, 7, 13 and 15 are rejected under 35 U.S.C. §102(a) as being anticipated by European Patent Document 1045586 (Taylor et al). On page 3 of the Office Action, claims 2, 4-6, 10-11, 14 and 16-17 are rejected as being unpatentable over the Taylor document in view of U.S. Patent No. 6,240,392 (Butnaru). On page 4 of the Office Action, claims 8-9 and 11-12 are rejected under 35 U.S.C. §103(a) as being unpatentable over Taylor in view of Butnaru and further in view of U.S. Patent Document US2002/0101537 (Basson et al). The foregoing rejections are respectfully traversed, as the Taylor document, considered alone or in combination with the other documents, fails to teach or suggest displaying visual representations of filtered sound in real time, received using a plurality of microphones as recited in Applicant's independent claim 1.

Figure 1 illustrates an exemplary embodiment of the present invention as an assembly 100 for converting sound into visual representations. The assembly 100

includes a plurality of microphones 104 for receiving sound. The microphones can be omni-directional. A processor 112 can include means for directionally filtering received sound using a filtering unit 118. Processor 112 includes a converting unit 120 for converting (e.g., translating) filtered sound into display control signals. The converting unit can, for example, include a speech recognition unit 122, a translating unit 116 and a signal generator 124. A display unit 108 is provided for displaying visual representations of filtered sound in real-time based on the display control signals.

The foregoing features are broadly encompassed by the independent claims 1, 13 and 15. For example, claim 1 is directed to a system for converting sound into visual representations comprising a plurality of microphones, a filtering unit, a converting unit and a display unit for displaying visual representations of filtered sound in real-time based on display control signals.

The Taylor document is directed to an image processing apparatus which includes cameras 2-1, 2-2 and 2-3. Sound received by a directional microphone array is processed by a computer processing apparatus 24. A direction processor 53 processes sound data from the microphone array 4 to determine the direction or directions from which the sound was received. A voice recognition processor 54 processes sound data to generate text data therefrom. However, visual representations of the sound are not disclosed as being displayed in real time. Image data, sound data, text data and data defining at whom each person is looking is stored in a meeting archive database 60. As described in paragraph [0147], text data can be displayed after archiving. However, the Taylor document does not teach or suggest that the display unit 26 is provided for displaying visual representations of

filtered sound in real-time based on the display control signals. As such, claim 1 is allowable over the Taylor document. Independent claims 13 and 15 are allowable over the Taylor document for similar reasons.

The remaining documents to Butnaru and Basson, considered individually or in combination with the Taylor patent, fail to overcome the deficiencies of the Taylor document. For example, the Butnaru patent discloses a communication device for deaf using a single microphone 70. As recognized by the Examiner, the Butnaru patent fails to teach or suggest use of a plurality of microphones and a filtering unit for directionally filtering received sound. There would have been no motivation or suggestion to have combined the features of the Butnaru and Taylor documents to arrive at Applicant's claim 1 combination. At best, any combination of the Butnaru and Taylor documents would have resulted in using the plurality of microphones disclosed in the Taylor document for archiving sound, or for detecting a direction from which sound arrived.

The Basson patent is directed to a portable, universal closed-captioned receiver. Like the Butnaru patent, the Basson patent fails to teach or suggest using plural microphones with a real-time display for visual representations of received sound. Rather, Basson discloses use of a single microphone 116. As such, any combination of Basson patent with the Taylor document and/or the Butnaru patent, would not have resulted in the presently claimed invention.

All rejections and objections raised in the Office Action having been addressed, it is respectfully submitted that the application is in condition for allowance and a Notice of Allowance is respectfully submitted.

Respectfully submitted,

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